IN THE CLAIMS

Rewrite Claims 1, 14, 17 and 19 as follows.   Cancel
Claims 13 and 22-27.   Add new Claims 28-33.

1.   (Amended)   A method of switching packets, the
method comprising:

receiving a packet with a source line card;

transforming the packet into one or more internal
frames in the source line card, wherein each user
internal frame includes a user switching tag and
corresponding user data payload;

transmitting the one or more user internal frames
from the source line card to a switch fabric having a
cross-point switch;

storing the one or more internal frames in a
cross-point buffer in the cross-point switch;

forwarding the one or more internal frames from
the cross-point buffer to a destination line card;

providing a cross-point buffer having a plurality
of cross-point queues at each cross-point of the
cross-point switch;

maintaining a plurality of actual available queue
space tables (AAQSTs) in the switch fabric, wherein
each of the AAQSTs identifies actual available queue
space in a corresponding set of the cross-point
queues; and

maintaining a predicted available queue space
table (PAQST) in each of the line cards, each of the
PAQSTs identifying predicted available queue space in
a corresponding set of the cross-point queues, each of
the PAQSTs corresponding with one of the AAQSTs.

2. (original) The method of Claim 1, further comprising limiting the length of each of the one or more internal frames to a maximum length L.

3. (original) The method of Claim 1, wherein the one or more internal frames have variable lengths.

4. (original) The method of Claim 1, further comprising converting the one or more internal frames to one or more packets in the destination line card.

5. (original) The method of Claim 1, further comprising storing the one or more internal frames in one of a plurality of cross-point queues in the cross-point buffer, wherein each of the cross-point queues supports a different quality of service.

6. (original) The method of Claim 5, further comprising:

transmitting a purge instruction from the line card to the switch fabric in the user switching tag;

purging one or more of the cross-point queues in response to the purge instruction.

7. (original) The method of Claim 1, further comprising selecting one or more bits in the user switching tag to identify whether the corresponding internal frame provides user data or control information.

8. (original) The method of Claim 1, further comprising selecting one or more bits in the user switching tag to identify whether the corresponding internal frame is

an only internal frame, a first internal frame of a group
of internal frames, a middle internal frame of a group of
internal frames, or a last internal frame of a group of
internal frames.

9. (original) The method of Claim 1, further
comprising selecting one or more bits in the user switching
tag to identify a quality of service for the corresponding
internal frame.

10. (original) The method of Claim 1, further
comprising identifying an address of the destination line
card using one or more bits in the user switching tag.

11. (original) The method of Claim 1, further
comprising storing an error correction code using one or
more bits in the user switching tag.

12. (original) The method of Claim 1, further
comprising identifying whether the corresponding internal
frame is transmitted to a single destination line card or
multiple destination line cards using one or more bits in
the user switching tag.

13. (Canceled)

14. (Amended) The method of Claim 1 13, wherein a
line card modifies an entry in its PAQST upon transmitting
an internal frame including user data to a cross-point
queue.

15. (original) The method of Claim 14, wherein the switch fabric modifies an entry of the AAQST corresponding to the PAQST upon receiving the internal frame transmitted by the line card.

16. (original) The method of Claim 15, wherein the switch fabric transmits an update instruction to the line card upon transmitting an internal frame to a destination line card, wherein the update instruction causes the line card to modify the PAQST.

17. (Amended) The method of Claim 1 ~~13~~, further comprising transmitting an instruction from a line card to the switch fabric using the user switching tag, wherein the instruction requests that the switch fabric transmit an AAQST to the line card.

18. (original) The method of Claim 17, further comprising transmitting the requested AAQST from the switch fabric to the line card using the user switching tag.

19. (Amended) The method of Claim 1 ~~13~~, further comprising:

   periodically transmitting a synchronization request from each line card to the switch fabric; and
   using the AAQSTs to update the PAQSTs in response to the synchronization request.

20. (original) The method of Claim 19, wherein the period of the synchronization request is a user-selected parameter.

21.   (original) The method of Claim 1, further comprising:

   monitoring an output buffer in the destination line card to determine whether the output buffer is unable to transmit the forwarded internal frames out of the destination line card in a timely manner;

   asserting an egress congestion indication signal when the output buffer is unable to transmit the forwarded internal frames in a timely manner; and

   preventing the switch fabric from transmitting internal frames to the destination line card when the egress congestion indication signal is asserted.

22.   (Canceled)

23.   (Canceled)

24.   (Canceled)

25.   (Canceled)

26.   (Canceled)

27.   (Canceled)

28.   (New)   A method of switching packets between a line card and a switch fabric that includes a fixed size queue corresponding to the line card, the method comprising:

   transmitting user internal frames from the line card to the queue;

   making a prediction within the line card as to whether the queue is full, wherein the prediction is made in response to user internal frames transmitted from the line card;

interrupting the transmitting of the user internal frames from the line card to the queue when the prediction indicates that the queue is full;

transmitting a control internal frame from the switch fabric to the line card to identify a change in the fill level of the queue;

updating the prediction within the line card as to whether the queue is full, wherein the updating is performed in response to the control internal frame transmitted from the switch fabric; and

enabling the transmitting of the user internal frames from the line card to the switch fabric when the prediction indicates that the queue is not full.

29.   (New)   The method of Claim 28, wherein the control internal frame identifies an incremental change in the fill level of the queue.

30.   (New)   The method of Claim 28, wherein the control internal frame identifies an absolute fill level of the queue.

31.   (New)   The method of Claim 30, further comprising transmitting the control internal frame in response to a periodic synchronization request provided by the line card.

32.   (New)   The method of Claim 30, further comprising transmitting the control internal frame in response to an update request provided by the line card.

33.   (New)   The method of Claim 30, further comprising transmitting a purge request control internal frame from

the line card to the switch fabric, wherein the switch
fabric resets the queue to an empty state in response to
the purge request control internal frame.